**BA Power LLC.** 

1101 N. Argonne Road, Suite A 211 Spokane Valley, WA 99212 1023 E 760 S Orem, UT 84097

# <u>Application for Low Carbon Fuel Standard</u> Innovative Crude Production Credits

### A Written Statement of Understanding by Applicants

Daybreak Oil and Gas, Inc. ("Daybreak") and BA Power LLC, ("BA Power") understand and agree to the following:

- All information in this application which is not identified as confidential business information is subject to public disclosure pursuant to the California Code of Regulations ("CCR") title 17, sections 91000 through 91022 and the California Public Records Act (Government code section 6250 et seq.), and that information claimed to be confidential in this application might later be disclosed under section 91022 if the State Board determines that the information is subject to disclosure.
- That either the crude oil producer or transporter (Daybreak) or the joint applicant (BA Power) must register under section 95483.1 as an opt-in regulated party to receive Low Carbon Fuel Standard (LCFS) credit for innovative crude production and that if neither applicant registers as an opt-in regulated party, credits from innovative crude production may be claimed by California refinery(ies) that purchase crude produced with the innovative method by Daybreak.

Daybreak Oil and Gas has opened an LCFS LRT-CBTS account and elects to opt in as a project operator.

### **B** Application summary material:

### Innovative Method description

The Daybreak 280 kW Solar Project ("Project") is a 284 kilowatt ("kW") direct current ("DC")/280 kW alternating current ("AC") ground-mounted 185 azimuth solar photovoltaic ("PV") project located in Daybreak's Dyer Creek and Mount Poso Field lease at Sections 11 and 13 of Township 26 South/Range 27 East MDDB northeast of Bakersfield, CA ("Oil Field"). The project is operational onsite and supplies electricity "behind the meter" to the Oil Field. BA Power is the owner of the Project, which will sell power to the Oil Field.

The Project consists of four 70 kW systems. Each system consists of 180 Hanwha Qcell 395w panels in nine arrays, four (4) Growatt Max 70KTL3 LV inverters for power conversion from DC to 3 phase AC, which is used directly by the Oil Field to power Daybreak's oil production equipment. The solar panels are fixed-mounted tilt. The system information is located in Attachment E.

Daybreak engaged BA Power LLC, to engineer, procure, construct, finance, and own the Project. Execution of the project is complete, and the project is online. The Project is estimated to generate 664,300 kWh of electricity annually based on four 70 kW units producing 280 kW per hour at an average of 6.5 hours per day for 365 days per year (4 \* 70 kW = 280 kW \* 6.5 hours = 1,820 kWh/day \* 365 days = 664,300 kWh/year).

The solar field produces a maximum of 1,820 kWh per day while the Oil Field consumes a minimum of 5,000 kWh per day while active (less than 1% of historical data may be less than minimum reported due to power outages, down time, etc.). Throughout the calculations below, the projected generation of 664,300 kWh will be used to make estimates of LCFS credits and Crude oil CI reduction, actual credits generated and Crude oil CI reduction will vary based on actual Project power production. The supporting power consumption and electricity usage from the start of each solar array through December 2021 is included in Attachment A.

The amount of electricity generated from the Project for Daybreak's Oil Field operations means that the same amount of electricity from PG&E's distribution grid will not be used for oil production which is ultimately consumed by California refinery(ies). Since the source of utility power includes some fossil fuels, the Project lowers the lifecycle carbon emissions of transportation fuels in California.

Pursuant to Section 95489(c)(1)(E) of the LCFS Regulation, the Project exceeds the substantiality threshold of 0.10gCO2e/MJ CI reduction based on the value of 511g CO2e/kWh and the following calculation, both provided in Appendix A of the LCFS Guidance Document for Crude Oil Innovative Method Application-Solar Generated Electricity:

Emissions Reduction (expected) =  $511 \text{ g/kWh} \times 664,300 \text{ kWh} \times 10^{-6} \text{ T/g} = 339 \text{ Metric Tons of CO2e/yr}$ 

Emissions Reduction (2021 actual) = 511 g/kWh x 503,867 kWh x  $10^{-6}$  T/g = 258 Metric Tons of CO2e/yr

### **BA Power LLC.**

The expected annual electricity generation by the project is 664,300 kWh annually. During the first full year of operation (2021), the system generated 503,867 kWh. The actual solar production, by solar array and month, for 2021 is in Attachment A and is used in the Carbon Intensity (CI) change calculation below.

Gross Standard Volume Oil Sales for 2021 for all production operated by Daybreak at Mount Poso was 34,458 bbl of oil (94 bopd) at a measured, temperature-corrected gravity of 14.7 API (Attachment G: Crude Oil Sales 2021). All crude oil associated with the solar usage is piped to the Sunday Tank Battery, where the oil and water are separated. The oil is then shipped via truck to the refinery(ies). Production is based on the annual barrels of oil sold to the refinery(ies) with supporting sales tickets showing volume and date. The value of 6290 MJ/bbl was interpolated between the standard values for 14 API and 15 API crude oil found in table A1 of *LCFS Guidance Document for Crude Oil Innovative Method Application-Solar Generated Electricity*.

 $\Delta$ CI (expected) = (339 T/yr x 10<sup>6</sup> g/T)/(34,458 bbl/yr x 6,290 MJ/bbl) = 1.564 g/MJ.

 $\Delta$ CI (2021 actual) = (258 T/yr x 10<sup>6</sup> g/T)/(34,458 bbl/yr x 6,290 MJ/bbl) = 1.190 g/MJ.

### • Engineering Drawings

### Please see:

i. Attachments C: Site Plans and Photographs

ii. Attachments D: Single-line Diagram

iii. Attachments E: Key Equipment Data Sheets

iv. Attachments F: Bidirectional Power Meter

### Map

Please see attached vicinity map in Attachment B. The GPS coordinates of the centroid of the Project are 35°39.410 N 119°0.909 W. The Project covers approximately 370 acres of land.

### Project Timeline

The project was previously constructed and operational before the LCFS application was submitted. The timeline of the construction is as follows:

- July 2020 70 kW constructed and operational for Ball Solar.
- September 2020 70 kW constructed and operational for Bear #1 Solar.

### **BA Power LLC.**

- November 2020 70 kW constructed and operational for Sunday Solar.
- December 2020 70 kW constructed and operational for Bear #2 Solar.

Attachment A shows the historical production, including starting dates, of each of the four solar installations providing electricity to the Daybreak Oil crude oil production wells.

### Preliminary Estimate of the Potential Innovative Method Credit

It is expected that in the first year of reported production (2022) in the LCFS program, the innovative crude oil production method credit will be 339 tons/yr based on the following calculation provided in Appendix A of the LCFS Guidance Document for Crude Oil Innovative Method Application-Solar Generated Electricity:

Emissions Reduction = 511 g/kWh x 664,300 kWh x  $10^{-6}$  T/g = 339 Metric Tons of CO2e/yr.

\* The solar arrays were operational for the full year in 2021, where the actual emissions reduction was 258 Metric Tons of CO2e. The emissions reduction is expected to increase in subsequent years.

The solar modules are subject to modest annual degradation that may decrease the number of credits produced annually over time.

Please see Attachment A for reference of power consumption and usage.

Actual power delivered by the Project will be metered separately and logged for reporting and verification purposes. Electricity delivered from the utility will be metered and logged as well. While the project is designed for power to be used entirely on-site, any incidental back-feed of power will be logged and deducted from electricity used on-site for LCFS credit calculations. The incidental backfeed will be measured using a bidirectional power meter (See Attachment F). Records will be kept and will be available upon request pursuant to section 95489(c)(4) of the LCFS regulation.

- C Project is Exempt from Section 95489(c)(2)(C) because it is a solar-based electricity Project.
- D Project is Exempt from Section 95489(c)(2)(D) because it is a solar-based electricity Project.
- **E** Reference List:

- Low Carbon Fuel Standard, CCR title 17 Subchapter 10 Article 4 Subarticle 7 Section 95480 et seq.
- California Air Resources Board Staff, (Not dated, Accessed, November 2021) LCFS
   Guidance Document for Crude Oil Innovative Method Application-Solar
   Generated Electricity Retrieved from
   https://ww2.arb.ca.gov/sites/default/files/2020-07/lcfsguidance\_20-06.pdf
- Pacific Gas and Electric Company, (updated 2016, July 8) Electric Rule No. 21
   Generating Facility Interconnections Retrieved from
   https://www.pge.com/tariffs/tm2/pdf/ELEC RULES 21.pdf

### **F** Transmittal Letter

See attached Transmittal Letter.

### **G** Confidential Business Information

Neither Daybreak Oil and Gas nor BA Power claim that anything contained in this application or any of its attachments is Confidential Business Information.

H This application and supporting documents are submitted by Daybreak through the Alternative Fuels Portal (<a href="https://ssl.arb.ca.gov/lcfsrt/Login.aspx">https://ssl.arb.ca.gov/lcfsrt/Login.aspx</a>) or via e-mail at the discretion of CARB staff and the Executive Officer of CARB. The undersigned representative of each co-applicant authorizes this transmittal.

## **BA Power LLC.**

I. Bennet Anderson, am attesting of behalf of BA Power and I, Tom Kilbourne, am attesting on behalf of Daybreak Oil and Gas, that the veracity of the information in the application packet and declaring that the information submitted accurately represents the actual and/or intended long-term, steady-state operation of the innovative method described in the application packet.

Daybreak Oil and Gas, Inc.

Signature: /

Thomas C. Kilbourne

Controller/Assistant Corporate Secretary

Daybreak Oil and Gas, Inc.

**BA Power LLC.** 

**BA Power LLC.** 

Attachment A: Power Consumption and Usage

Attachment B: Vicinity Map

Attachment C: Site Plan and Photographs

Attachment D: Single Line Diagram

Attachment E: Key Equipment Data Sheets Attachment F: Bidirectional Power Meter Attachment G: Daybreak Crude Oil Sales 2020 Attachment A: Power Consumption and Usage

Array/Location	Ball	Bear 1	Bear 2	Sunday	Total	
2020	kWh	kWh	kWh	kWh	kWh	Notes
Jan						
Feb						
Mar						
Apr						
May						
June						
July	8,863					Ball Operational
Aug	12,174					
Sept	12,319	10,582				Bear 1 Operational
Oct	8,792	9,117				
Nov	9,262	8,538		2,414		Sunday Operational
Dec	7,721	7,193	1,822	6,859		Bear 2 Operational
2021	kWh	kWh	kWh	kWh	kWh	Notes
Jan	7,485	8,254	7,193	8,356	31,288	
Feb	9,745	10,215	9,336	9,624	38,920	
Mar	11,422	11,871	11,616	11,254	46,163	
Apr	12,258	11,694	12,385	12,581	48,918	
May	12,371	12,898	12,767	12,912	50,948	
June	11,883	12,272	13,219	13,317	50,691	
July	11,764	11,843	12,972	12,887	49,466	
Aug	11,694	11,539	13,177	13,219	49,629	
Sept *	12,127	5,341	12,589	12,174	42,231	* = system repairs
Oct *	10,422	6,221	11,768	11,388	39,799	* = system repairs
Nov	8,985	9,118	9,783	9,366	37,252	
Dec	5,135	4,882	4,168	4,377	18,562	
2021 Total	125,291	116,148	130,973	131,455	503,867	

Bear 1 and 2 Solar Arrays

DAY - Sunday Tank Battery

Sunday 1 Solar Array

Google Earth

lat 35.705622° lon -119.114570° elev 618 ft eye alt 25879 ft

Attachment C: Site Plan and Photographs

# DAYBREAK OIL



**AERIAL LOCATION** 



AERIAL VICINITY

# **PROJECT SCOPE**

INSTALL SOLAR SYSTEM TO SUPPLY POWER TO OIL DRILLING WELLS

# **PROJECT TEAM**

	DRAWING INDEX			
SITE CONTACT:				
BEN ANDERSON	SHEET#:	SHEET NAME		
801-380-6954				
	T-101	TITLE SHEET		
DESIGN FIRM	A-101	BEAR #1 SITE PLAN		
	A-102	BEAR #2 SITE PLAN		
FREESTYLE ENERGY	A-103	BALL SITE PLAN		
MIKE JONES	, ,			
5450 KATELLA AVE #108	A-104	SUNDAY SITE PLAN		
	E-101	SINGLE LINE DRAWING		
LOS ALAMITOS, CA 90720	D-101	RACKING DETAILS		
PHONE: 949-887-2812				
EMAIL: emjones@freestylenrg.com>	D-102	SPEC. SHEETS		

# **CODES AND ORDINANCES**

USE ONLY APPROVED AND LISTED DEVICES, HARDWARE AND COOPER WIRE FOR BRANCH CIRCUITS SUITABLE FOR INTENDED USE.

# **NOTES:**

- 1. ALL GROUNDING ELECTRODES CONDUCTOR MUST BE COPPER
- 2. GROUNDING AND BONDING TESTING FOR CONTINUITY AND FOR RESISTANCE 25 OMHS OR LESS. WHEN MORE THAN 25 OMHS, (2) GROUNDING RODS A MINIMUM OF 6'-0" APART IS REQUIRED AT THE MAIN SERVICE.
- 3. GROUNDING FAULT PROTECTION REQUIRED.
- 4. BOLTS FOR ALL CONNECTORS MUST BE WRENCHED TIGHT.
- 5. GRADE 60 STEEL REBAR @ ALL FOOTINGS TYPICAL.
- 6. BOND METAL RACK AT 690-43 CEC 2010 #6 AWG CU (FRAME OF CARPORT).
- 7. COVER NO WORK UNTIL APPROVED AND BARRICADE STREET OR PEDESTRIAN AREAS.
- 8. CONFIRM UTILITY LOCATIONS PRIOR TO EXCAVATION.
- 9. USE 8'-0" X 5/8" GROUND RODS AT ALL LOCATIONS
- 10. FOR BORING RUNS VERIFY DEPTHS EVERY 100'-0". SHORING REQUIRED AT MORE THAN 4'-0" DEPTH W/ JACKING PIT. BARRICADE WHEN NOT IN USE.
- 11. VERIFY IF GFCI INTEGRATED SERVICE FOR MSB CEC ART 230.95 PROVIDE INFORMATION FOR EXISTING ELECTRICAL SERVICE.
- 12. APPLY OXIDE INHIBITOR AND TORQUE ALUMINUM WIRE/CABLE TO MFR'S SPEC.

# PERMITTING/PLANNING NOTES

1. NEW MAIN SERVICE INSTALLATION IS SUBJECT TO INSPECTION BY THE AUTHORITY HAVING JURISDICTION

2. THIS PROJECT SHALL CONFORM TO THE FOLLOWING CODE VERSIONS:
2019 CALIFORNIA BUILDING CODE (CBC 2019)
2019 CALIFORNIA ELECTRIC CODE (CEC 2019)
2019 CALIFORNIA FIRE CODE (CFC 2019)
AUTHORITY HAVING JURISDICTION

The service equipment incoming connection shall be de-energized and reconnected by PG&E and shall be coordinated by PG&E.

All secondary feeder conductors shall be disconnected and reconnected to new circuit breakers within the new distribution equipment.

The existing ground conductor shall be reconnected to the new ground bus of the new distribution equipment.



Confidentiality Statement:
This drawing is the property of Shorebreak Energy Developers. This information is confidential and is to be used only in connection with work described by Shorebreak. No part is to be discolosed to others without written permission from Shorebreak.

FREESTYLE ENERGY

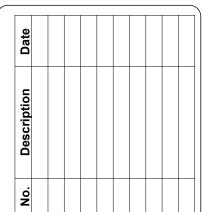
Executive Approval

P/P 3 MILES NORTH, 1050' WEST OF TULE RE D. CA

DAY
FAMOS
BAKER

CLIENT APPROVAL

Client Initials



Title Sheet

T-1

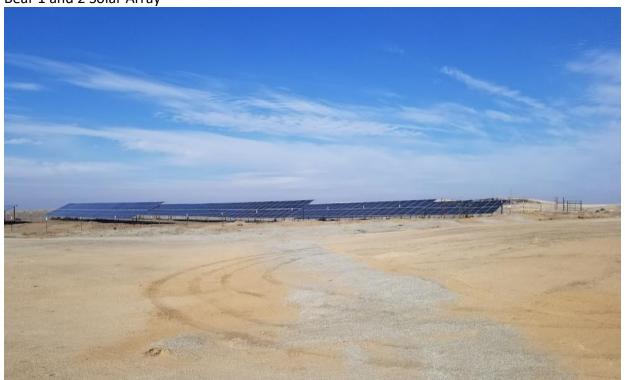
11/25/2020 No Scale







Bear 1 and 2 Solar Array





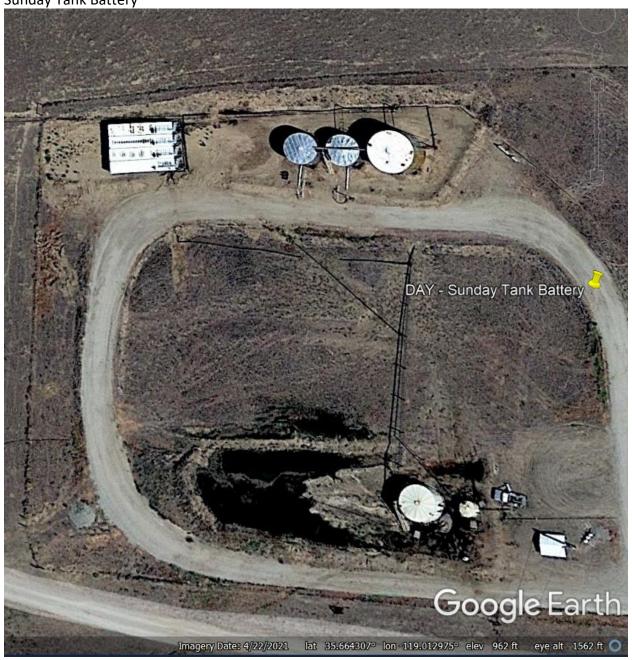
Sunday Solar Array





# BA Power LLC.

Sunday Tank Battery



## Attachment D: Single Line Diagram

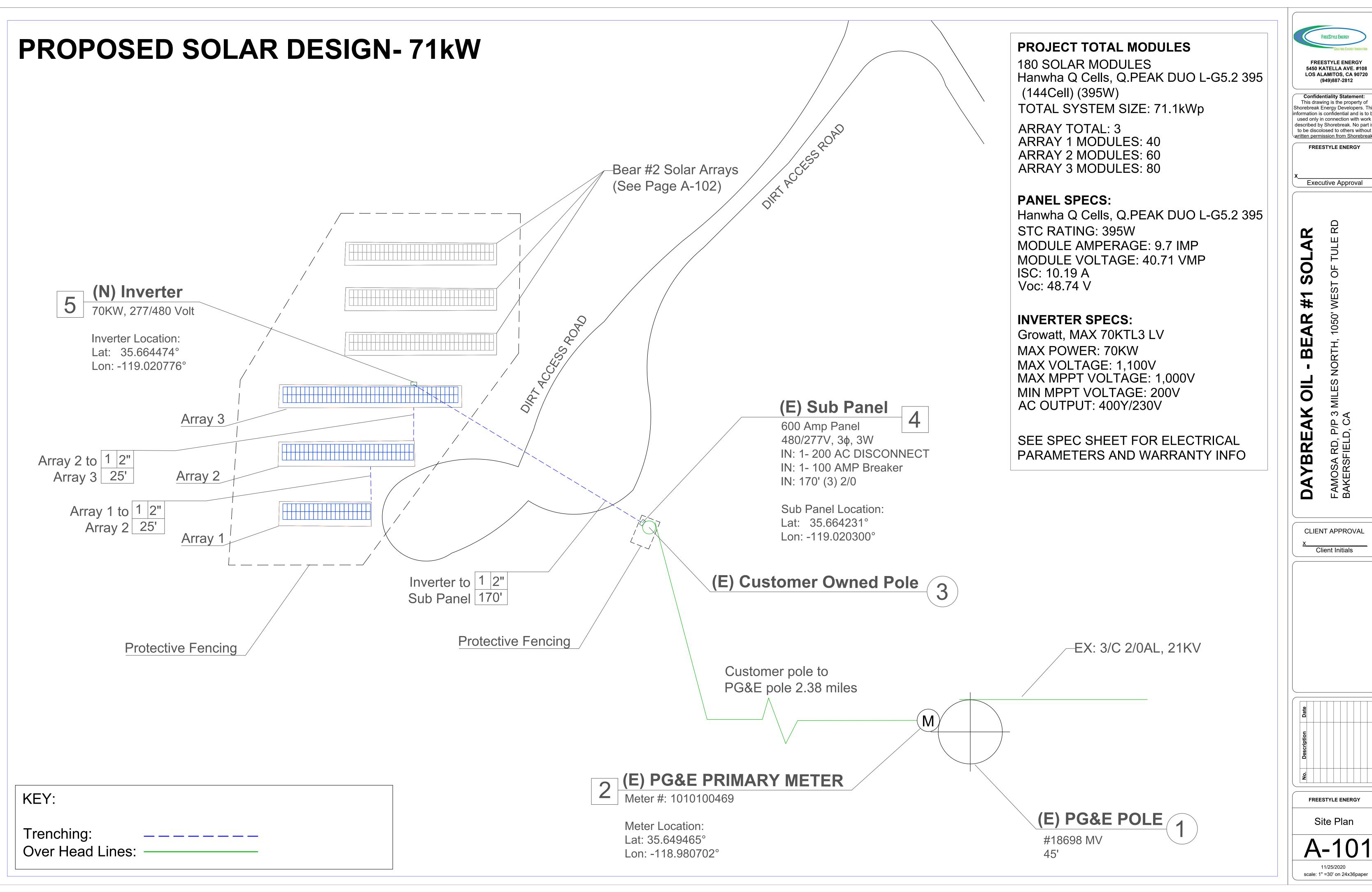
## SINGLE LINE DIAGRAM 5450 KATELLA AVE. #108 **LOS ALAMITOS, CA 90720** (949)887-2812 600A MAIN SERVICE PANEL **INVERTER** 480/277V, 3φ, 4W EX: 3/C 2/0AL, 21KV 70KW, 277/480 Volt **BEAR SOLAR #1** 200 AMP AC DISCONNECT 10 AWG Copper to be discolosed to others without -PG&E 21KV 100 AMP CIRCUIT BREAKER **FREESTYLE ENERGY** PRIMARY METER 10 AWG Copper #1010100469 Customer Pole to **Executive Approval** String count: 9 Module count: 180 10 AWG Copper PG&E Pole 2.38 miles CUSTOMER OWNED POLE AND TRANSFORMER (3) 50KVA, 480/277V MAX 70KTL3 LV (Sept 2019) SERVICE FROM UTILITY Q.PEAK DUO L-G5.2 395 (144Cell) 600A MAIN SERVICE PANEL **INVERTER** 480/277V, 3φ, 4W EX: 3/C 2/0AL, 21KV 70KW, 277/480 Volt BEAR SOLAR #2 200 AMP AC DISCONNECT 10 AWG Copper PG&E POLE 100 AMP CIRCUIT BREAKER 10 AWG Copper -Customer Pole to String count: 11 Module count: 198 10 AWG Copper PG&E Pole 2.40 miles BREAK CUSTOMER OWNED POLE AND TRANSFORMER (3) 50KVA, 480/277V MAX 70KTL3 LV (Sept 2019) Q.PEAK DUO L-G5.2 395 (144Cell) 600A MAIN SERVICE PANEL DAYI FAMOS, BAKERS **INVERTER** 480/277V, 3φ, 4W EX: 3/C 2/0AL, 21KV 70KW, 277/480 Volt BALL SOLAR #1 200 AMP AC DISCONNECT 10 AWG Copper 100 AMP CIRCUIT BREAKER CLIENT APPROVAL √10 AWG Copper Client Initials -Customer Pole to String count: 9 Module count: 180 0—ó ò− 100A 10 AWG Copper PG&E Pole 4.30 miles CUSTOMER OWNED POLE AND TRANSFORMER (3) 50KVA, 480/277V MAX 70KTL3 LV (Sept 2019) Q.PEAK DUO L-G5.2 395 (144Cell) 600A MAIN SERVICE PANEL **INVERTER** 480/277V, 3φ, 4W EX: 3/C 2/0AL, 21KV 70KW, 277/480 Volt SUNDAY SOLAR #1 200 AMP AC DISCONNECT 10 AWG Copper 100 AMP CIRCUIT BREAKER √10 AWG Copper \_\_\_\_ -Customer Pole to String count: 11 Module count: 198 10 AWG Copper PG&E Pole 1.36 miles FREESTYLE ENERGY CUSTOMER OWNED POLE AND TRANSFORMER (3) 50KVA, 480/277V Single Line Diagram MAX 70KTL3 LV (Sept 2019)

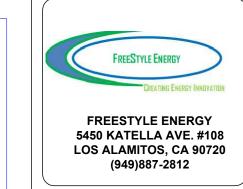
E-101

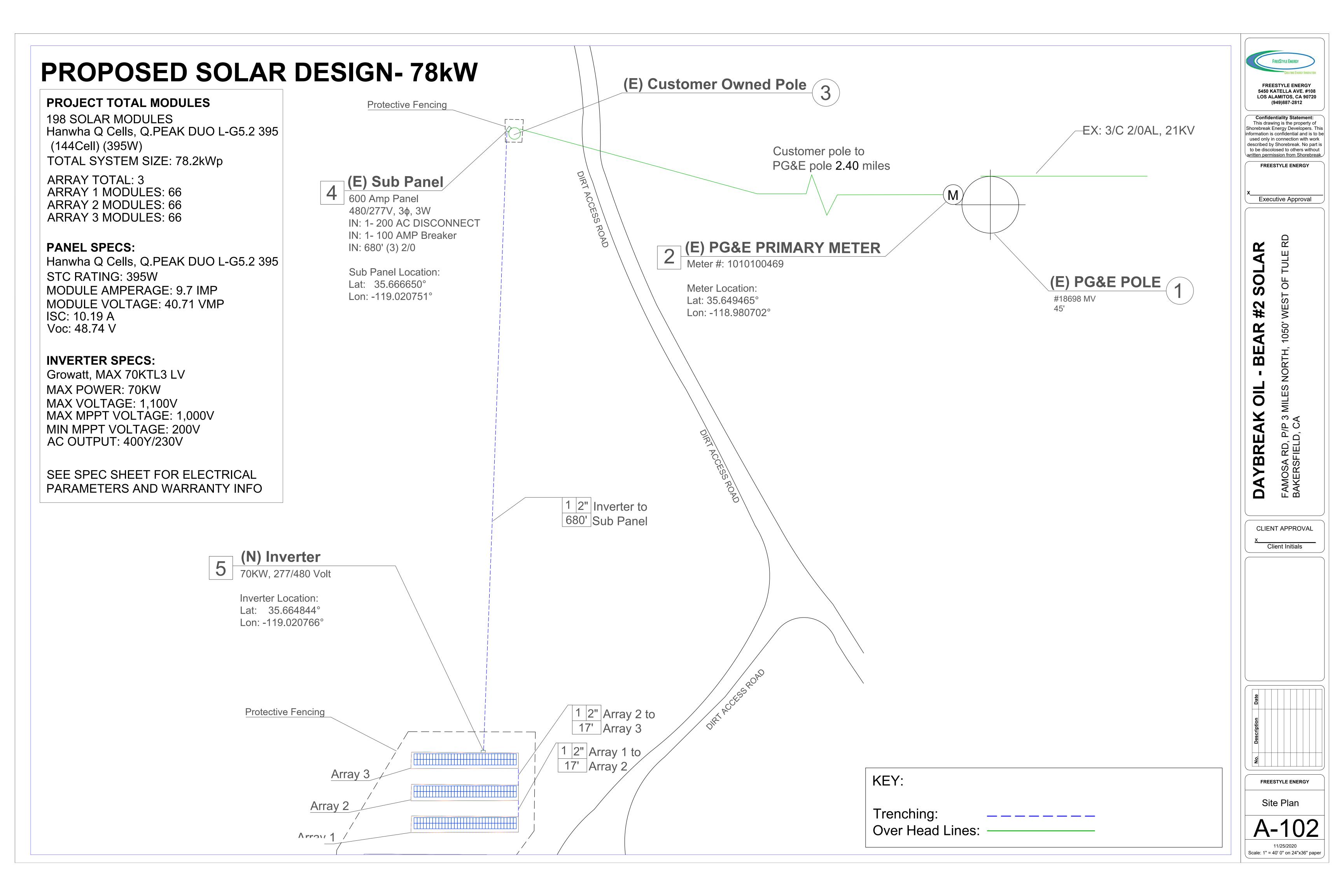
No Scale

Q.PEAK DUO L-G5.2 395 (144Cell)

Attachment E: Key Equipment Data Sheets







# PROPOSED SOLAR DESIGN-71kW PROJECT TOTAL MODULES 180 SOLAR MODULES Hanwha Q Cells, Q.PEAK DUO L-G5.2 395 Protective Fencing (144Cell) (395W) TOTAL SYSTEM SIZE: 71.1kWp 1 2" Array 1 to 25' Array 2 ARRAY TOTAL: 2 ARRAY 1 MODULES: 100 ARRAY 2 MODULES: 80 **PANEL SPECS:** Array 2 (N) Inverter Hanwha Q Cells, Q.PEAK DUO L-G5.2 395 70KW, 277/480 Volt 5 STC RATING: 395W MODULE AMPERAGE: 9.7 IMP MODULE VOLTAGE: 40.71 VMP **Inverter Location:** ISC: 10.19 A Lat: 35.685815° Voc: 48.74 V Lon: -119.037466° SOL Array 1 **INVERTER SPECS:** Growatt, MAX 70KTL3 LV MAX POWER: 70KW MAX VOLTAGE: 1,100V 1 2" Inverter to MAX MPPT VOLTAGE: 1,000V 117' Sub Panel MIN MPPT VOLTAGE: 200V AC OUTPUT: 400Y/230V BREAK (E) Sub Panel – SEE SPEC SHEET FOR ELECTRICAL 600 Amp Panel 480/277V, 3φ, 3W PARAMETERS AND WARRANTY INFO IN: 1- 200 AC DISCONNECT DAYI IN: 1- 100 AMP Breaker Protective Fencing IN: 117' (3) 2/0 **Sub Panel Location:** Lat: 35.685521° Lon: -119.037410° Client Initials (E) Customer Owned Pole 3 EX: 3/C 2/0AL, 21KV Customer pole to PG&E pole 4.30 miles (E) PG&E PRIMARY METER Meter #: 1010100469 KEY: (E) PG&E POLE 1 Meter Location: Lat: 35.649465° #18698 MV Trenching: Lon: -118.980702° Over Head Lines:

5450 KATELLA AVE. #108

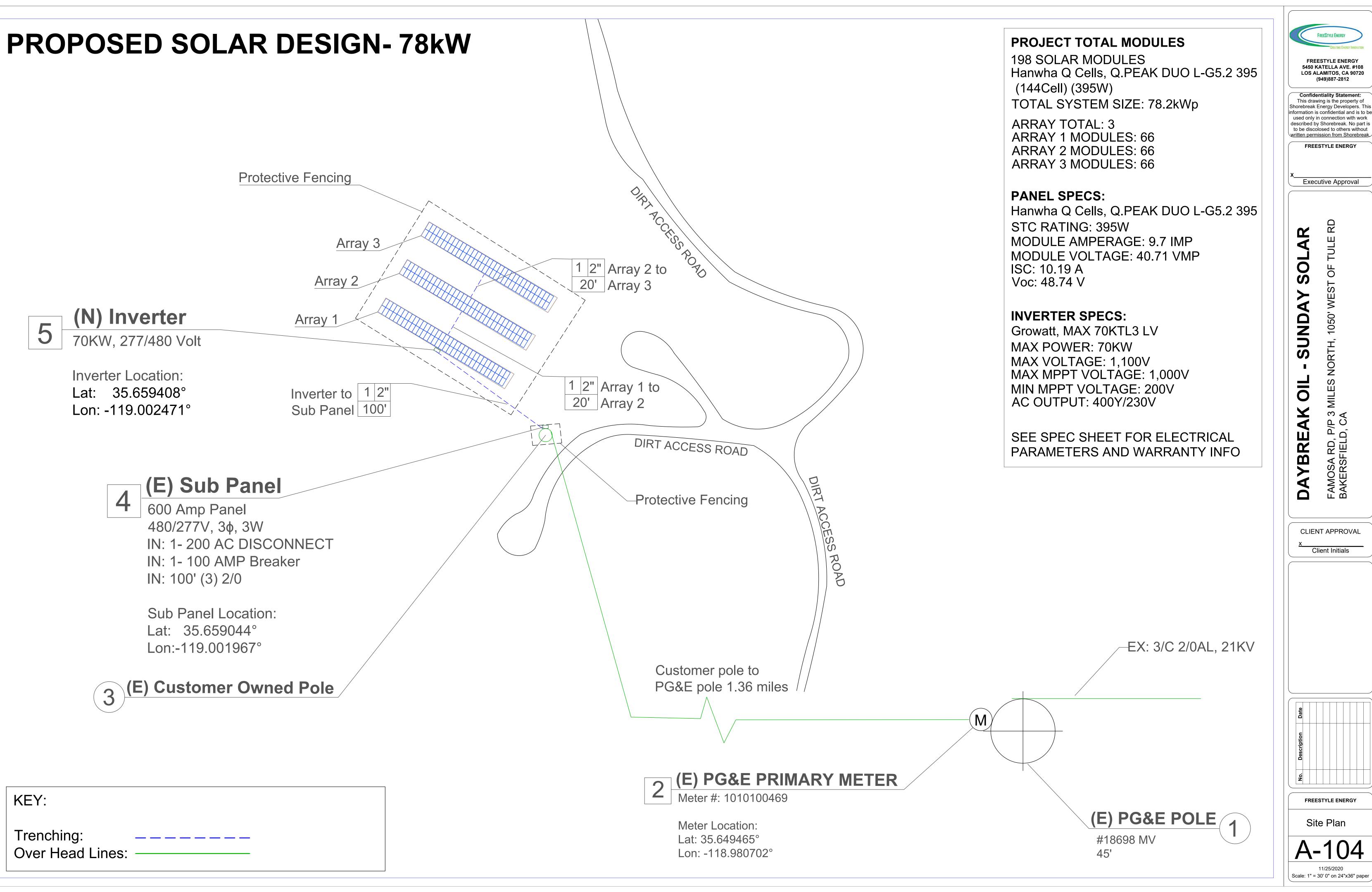
Executive Approval

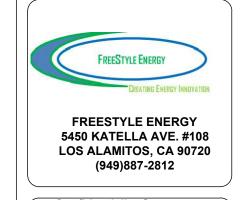
CLIENT APPROVAL

FAMOS, BAKERS

FREESTYLE ENERGY Site Plan

A-103 11/25/2020 Scale: 1" = 30' 0" on 24"x36" paper





Executive Approval

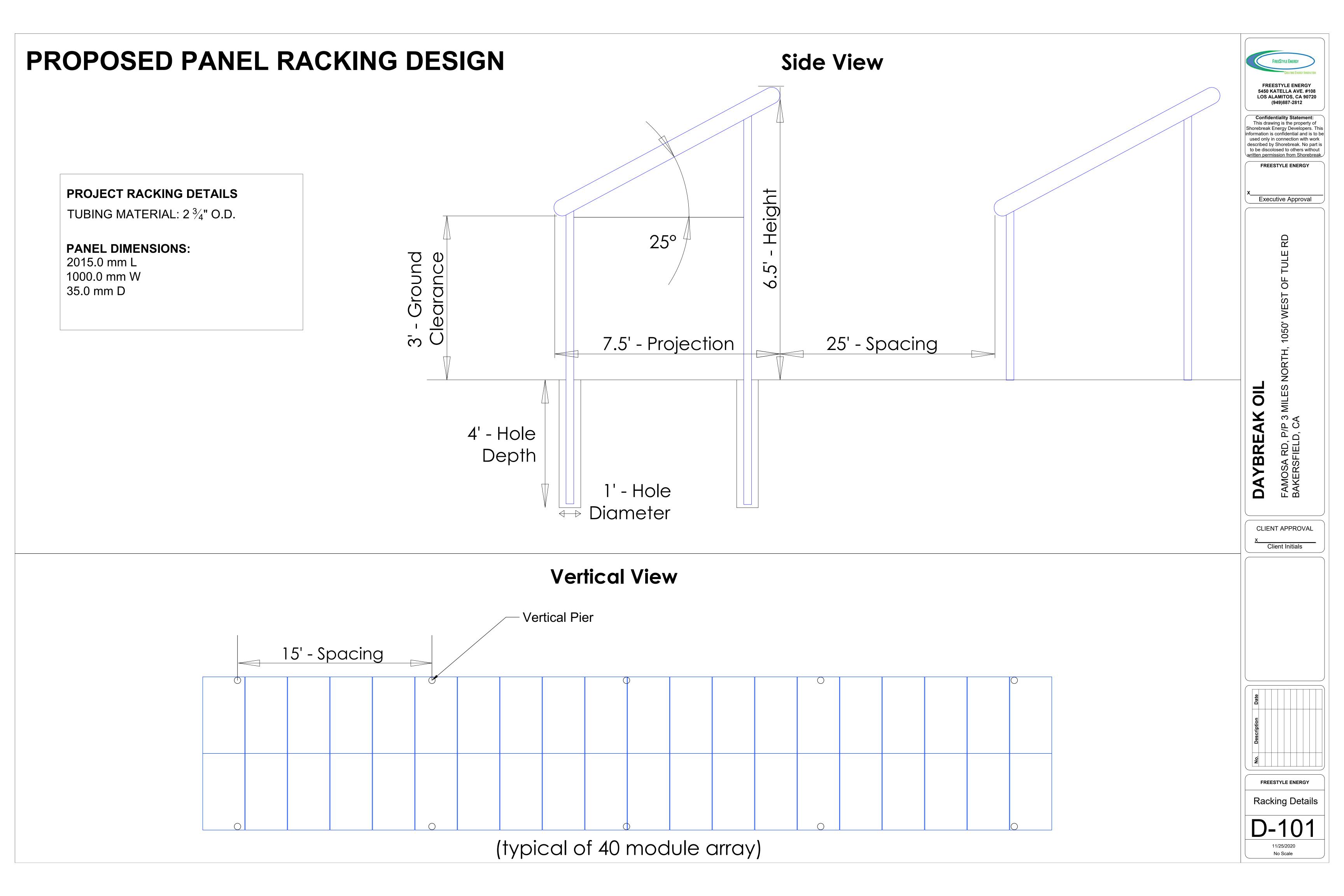
CLIENT APPROVAL

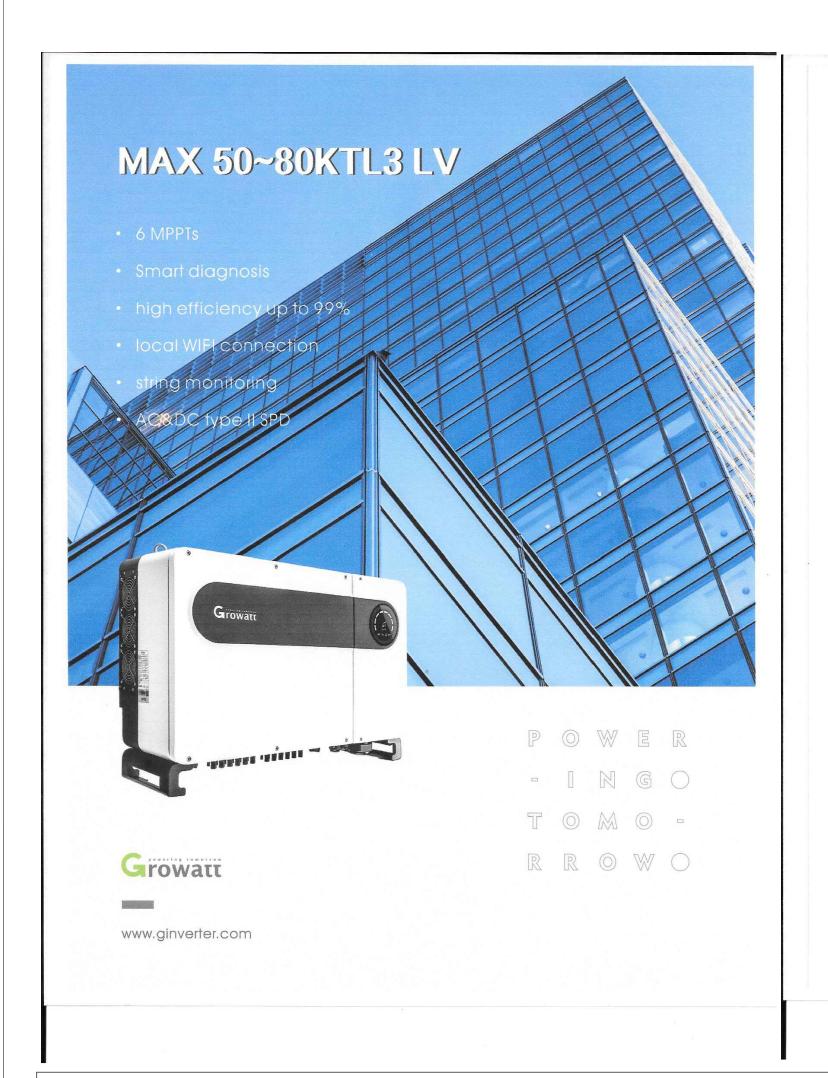
Client Initials

FAMOS, BAKERS

FREESTYLE ENERGY Site Plan

A-104

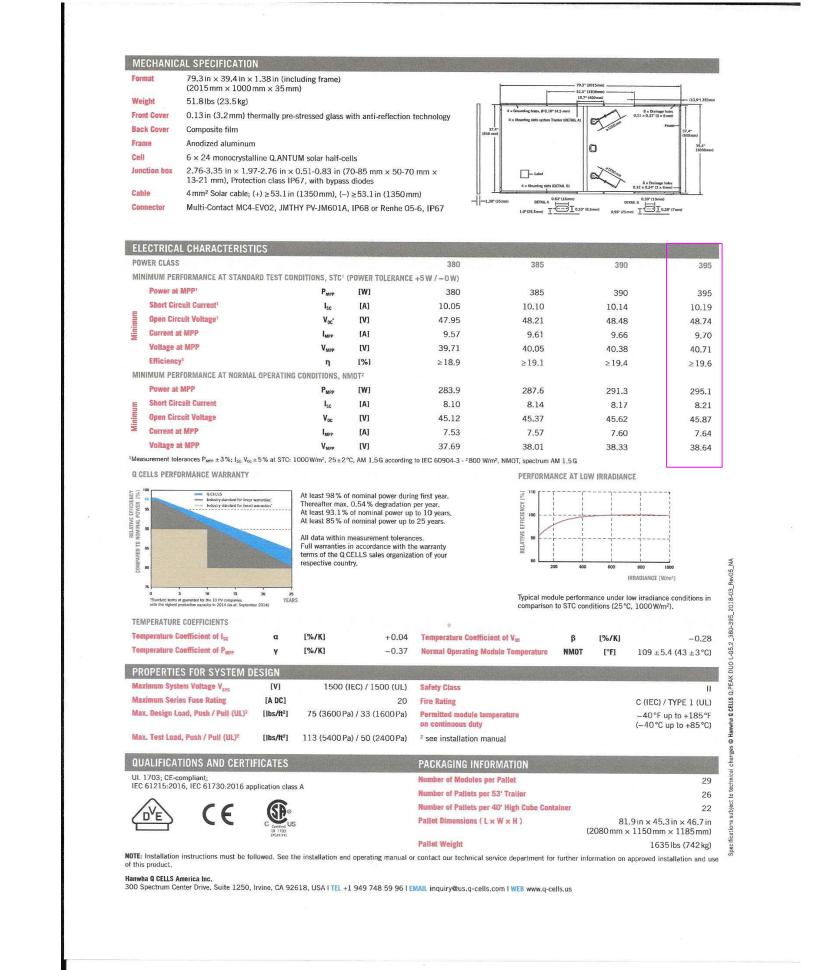


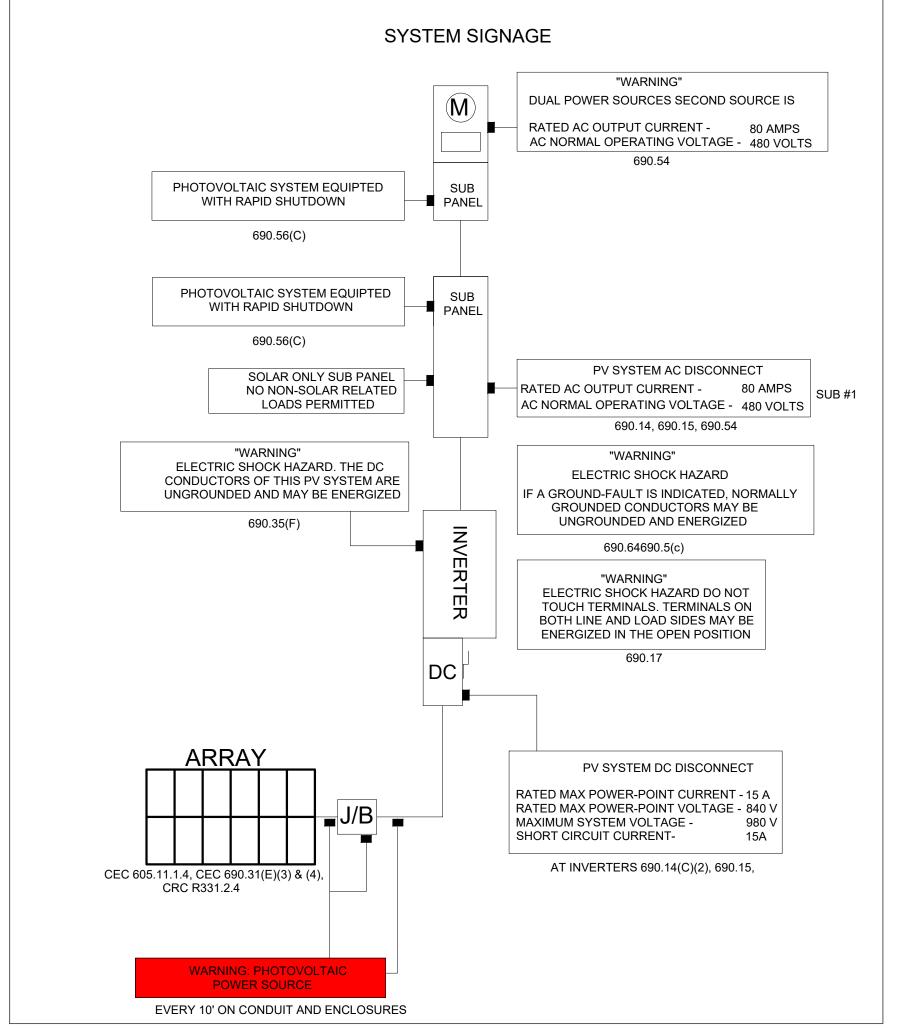


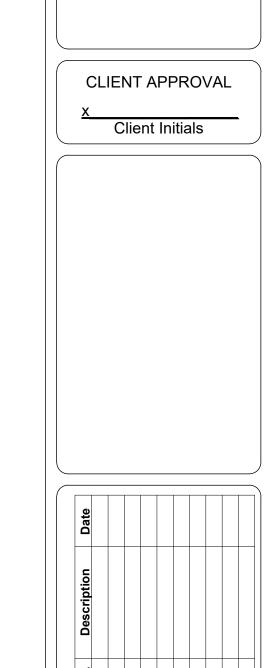
ManuFig Devision	Datasheet	MAX 50KTL3 LV	MAX 60KTL3 LV	MAX 70KTL3 LV	MAX 80KTL3 LV
	Input Data	Market Control			
## work volinge range	Max.DC power	65000W	78000W	91000W	104000W
## work volinge range	Max.DC voltage	1100V	1100/	1100V	1100/
## work voltager range   2007-1000V   2007-1	Control of the Contro				
Selection   Sele					
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Dulput (AC)  Dulp	AND REPORT OF THE PROPERTY OF				25A
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Max. AC apparent power   SS500VA   66600VA   777700VA   77700VA	Output (AC)				
Mass output current	Rated AC output power			236765557	
AC nominal vallage 230V/400V;340-440V 230V/40V*24V 240V 240V/40V/240V 240V/40V/40V/240V 240V/40V/240V 240V/40V/240V 240V/40V/240V 240V/40V/240V				CONTRACTOR OF THE PARTY OF THE	
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AC grid connection type			78 (1867) (100-100-100)		
## AC gild connection type    3W+N+PE		0.8leading0.8lagging	0.8leading0.8lagging	0.8leading0.8lagging	0.8leading0.8lagging
### Action	THDi		3,000	2.7863.786	
### Adv.efficiency	•	3W+N+PE	3W+N+PE	3W+N+PE	3W+N+PE
Part		00.00	00.00		
### Profection Devices  ### Profection Pevices  #### Profection Pevices  ##### Profection Pevices  ##### Profection Pevices  #### Profection Pevices  ##### Profection Pevices  ###### Profection Pevices  ###################################			posterior de la constantina della constantina de		
Protection Devices  OC reverse potarity protection  yes  yes  yes  yes  yes  yes  yes  ye	MPPT efficiency		SVA CHIERDANI II.	Vesteration	
Description	Protection Devices				
Ves	DC reverse polarity protection	yes	yes	yes	ves
Type     Type	DC Switch		100000		
Second fault monitoring   Yes   Ye	DC Surge protection	Type II	Type II		
AC Surge protection  Type II  Opt  Past  ###  ###  ###  ###  ###  ###  ###	Ground fault monitoring	yes	yes	192	
AC Surge protection  Type II  Opt  Opt  Opt  A60/60/300  860/600/30  860/600/90  860/60/00  860/60/00  860/600/00  860/600/00  860/600/00  860/600/00	Output short circuit protection	yes	yes	yes	ves
String fault monitoring   yes   yes   yes   yes   yes   yes   yes   opt   op	AC Surge protection	Type II	Type II	Type II	
Anti-PID protection opt	String fault monitoring	ves	3253	3702	
Selection   Company   Co	Anti-PID protection		100000	4,000	
Dimensions (W/H/D) in mm	General Data				
Weight         82kg	Dimensions (W/H/D) in mm	860/600/300	860/600/300	860/600/300	860/600/300
Operating temperature range         -25°C +60°C         <	Weight		Townson .	and the state of t	
Self-Consumption   < 1 W*	Operating temperature range Noise emission (typical)				
Topology         Transformerless         Smart cooling         Smart cooling         Smart cooling         Smart cooling         Smart cooling         IP65         IP65<	Self-Consumption	< 1W*	< 1W*	< 1W*	
Environmental Protection Rating IP65 IP65 IP65 IP65 IP65 IP65 IP65 Altitude 4000m 40000m 40000m 4000m 4000m 40000m 40000m 40000m 40000m 40000m 40000m 40000m	Topology	Transformerless	Transformerless	Transformerless	
Altitude 4000m 400	Cooling concept	Smart cooling	Smart cooling	Smart cooling	Smart cooling
Relative Hurnicitity 0-100% 0-100% 0-100% 0-100% 0-100%  Features  Display LED/MIFI+APP LED/MIFI+APP LED/MIFI+APP LED/MIFI+APP LED/MIFI+APP yes / yes / opt	Environmental Protection Rating		The same of	IP65	IP65
Display	Altitude				
Display LEDMIFI+APP LEDMIFI+AP		0-100%	0-100%	0-100%	0-100%
nterfaces:USB/R485/GPRS yes/opt yes/opt yes/opt yes/opt yes/opt yes/opt yes/opt warranty:5 years / 10 years yes/opt yes/opt yes/opt yes/opt	Features Display	LEDAMET AND	LEDANETHARD	LEDAME.	
Warranty:5 years / 10 years yes / opt yes / opt yes / opt yes / opt	Interfaces:USB/R485/GPRS		1 SOMETHING AND COLU	THE STATE OF THE S	
	Warranty:5 years / 10 years			8.2. 8. 8	
9, 100 03.00, 10 07.7	COC, CE, VDE 0126-1-	1, UTE C 15-712, VDE-AR-N4105	EN50438, DRRG, CEI 0-16, BDFW	, IEC 62116, IEC61727, IEC 600A	
				, , , , , , , , , , , , , , , , , , , ,	

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E: info@ginverter.com
\* If use AC power supply, self-consumption at night < 25W









FREESTYLE ENERGY

Spec. Sheets

No Scale

FREESTYLE ENERGY 5450 KATELLA AVE. #108

LOS ALAMITOS, CA 90720

(949)887-2812

Confidentiality Statement:

This drawing is the property of

Shorebreak Energy Developers. This

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used only in connection with work described by Shorebreak. No part is to be discolosed to others without written permission from Shorebreak.

FREESTYLE ENERGY

Executive Approval

## Attachment F: Bidirectional Power Meter





#### **FEATURES**

- Full meter programming and firmware updates over the air
- Customize advanced metering options including kWh, kVArh & kVAh
- 4-quadrant measurements
- Voltage and Current THD per phase, TDD (Total Demand Distortion), Distortion
   Power Factor, Distortion kVA, and
   Distortion kVAh
- Per phase AC instrumentation (amps, volts, and frequency)
- Programmable diagnostics for voltage imbalance, distortion, current imbalance, reversed polarity, high neutral current.
- Tamper detection tools and installation verification capabilities to automatically catch errors, wiring changes, tampering, and billing issues
- Voltage sag and swell log

### **BENEFITS**

- Flexible two-way communication via FlexNet network
- FlexNet communications network supports multiple applications
- FlexNet communications network is FCC approved for operation on an unshared primary-use licensed spectrum

## Aclara kV2c Electric Meter

# Commercial & Industrial Meter with FlexNet® SmartPoint® Module

Aclara's premier commercial and industrial kV2c meter family has become even more powerful. The Gen 5 kV2c meter is now internally equipped with a Sensus SmartPoint module, giving utilities the power and performance of the FlexNet Communications Network coupled with revenue grade metering functionality and advanced power quality monitoring.

### Overview

The kV2c meter moves beyond revenue metering to real time instrumentation, true power quality monitoring and real cost of service measurements. Whether you are metering the simplest energy rate or collecting critical quality of service and load analysis information on a polyphase or a single phase circuit, there is a kV2c meter configuration to meet your needs.

The Aclara kV2c meter family is one of the most widely accepted ANSI® commercial and industrial meters with over two million units deployed in the field since its introduction. The robust revenue-grade meter design is based on Aclara's cutting edge technology that provides high accuracy and reliability.

### Metrology

- kWh, kVARh and kVAh energy measurements with associated demand values
- ANSI C12.20 Accuracy Class 0.2% with typical accuracy better than 0.2%
- Programmable sag and swell monitor that logs voltage sag and swell duration down to one cycle
- Time and date stamped meter event log
- Robust revenue-grade watt-hour and demand meter with advanced recording options.
- Versatile programming softswitches allowing the selection of advanced functionality such as expanded recording features, time of use, load profile and power quality measures.
- Powerful functional upgrades provide 8-channel 64 kb, 20-channel 192 kB, or 20-channel 384 kB recording for voltage, current, real and reactive energy, apparent energy, distortion kVAh, THD and TDD.



## Aclara kV2c Electric Meter

### Commercial & Industrial Meter with FlexNet® SmartPoint®

#### **OPTIONS**

Service	1φ, 2 wire	1¢, 3 wire	1¢, 2 wire	1¢, 3 wire	3¢, 4 wire, Wye or Δ	Network or 3φ, 3 wire Δ	3¢, 4 wire, Wye or ∆	3φ, 4 wire, Wye	Network or 3φ, 3 wire Δ
Class	200	200 & 320	20	20	20	200 & 320	200 & 320	20	20
Form	1S	2S	3S	48	98	12S	16S	36S	45S

An optional form 16S, class 100, 120 volt meter with 3 $\phi$  RCDC switch is available. Form 36S replaces form 6S; form 45S replaces form 5S and form 35S meters. Form 9S and 16S meters support Aclara's Fitzall<sup>TM</sup> feature.

### **SPECIFICATIONS**

Power Requirements	Voltage Rating: 120 to 480 volts Voltage Range: ±20% of voltage rating Frequency: 50 or 60 Hz		
Operating Environment	Temperature: -40°C to +85°C (-40°F to 185°F) Humidity: 0% to 95% non-condensing		
Dimensions	Diameter: 17.63 cm (6.94 inches) Depth: 15.24 cm (6 inches)		
Model	FLEXKV2C		
FCC ID	SDBFLEXKV2C		
ID	2220A-FLEXKV2C		
Mechanical Design	Durable one piece Lexan™ cover Rugged single action reset lever Magnetic switch activates alternates Alternate and Site Genie displays		
Accuracy	Meets ANSI C12.20 for accuracy class 0.2 Typical accuracy better than ±0.2%		
Tamper Detection Options	Received kWh detection (optional) Demand reset counter FlexNet on-board vibration sensor		
Load Profile	Up to 20 channels of ANSI C12.19 load profile data. Up to 15 snapshots		
Connect/Disconnect Switch	Available on Form 16S, Class 100, 120 - 240, 50/60 Hz meter only Three pole, single throw, magnetically-latching Endurance: 5000 cycles @ 100A, 240Vac, 50/60 Hz, 30,000 mechanical operations		
Characteristic Data	Starting current: Typically less than 0.1 amps for SC meters; 0.05 amps for TR meters Typical Watts Loss: < 0.8W @ 120V, Phase A; < 0.1W @ 120V, Phase B & C		
LCD Display	Six digit liquid crystal display User-definable scroll list; 75 items total Power flow and mechanical disk emulator kWh display with segment check option		

#### METER FUNCTIONALITY

Meter Features	Bi-directional real and reactive energy and demands Q-hour meter Real time pricing (CPP) TOU Meter Up to 20 channel load profile recorder Power quality meter (THD, TDD and distortion power) Current and Voltage recorder Transformer/Line loss and accuracy compensation Real time multifunction instrument Four quadrant meter Individual phase metering
Logging	Security Log Voltage sag and swell log Meter events log

Some functionality may require additional soft switches.



**SENSUS** | 637 Davis Drive | Morrisville, NC 27560 | 800.638.3748

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Attachment G: Daybreak Oil Sales

Year	Month	Crude Oil (bbl)
2021	December Total	2,957.00
2021	November Total	1,947.00
2021	October Total	3,516.00
2021	September Total	2,344.00
2021	August Total	2,917.00
2021	July Total	2,873.00
2021	June Total	3,125.00
2021	May Total	3,326.00
2021	April Total	2,349.00
2021	March Total	3,029.00
2021	February Total	2,962.00
2021	January Total	3,113.00
2021	<b>Grand Total</b>	34,458.00